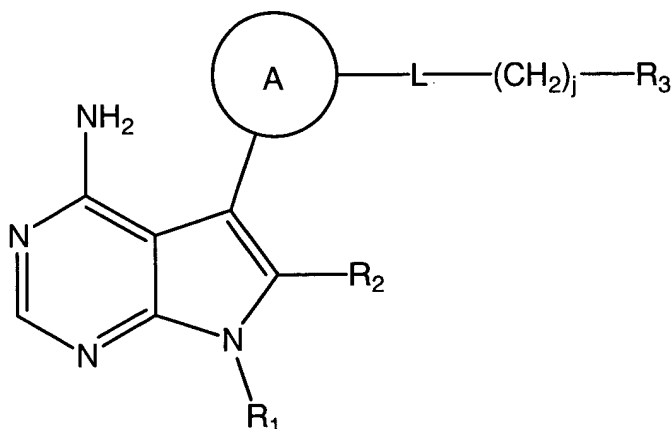


APPENDIX A

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

1. (Four Times Amended) A compound represented by the following structural formula:



or pharmaceutically acceptable salts thereof, wherein:

Ring A is a six membered aromatic ring or a five or six membered heteroaromatic ring which is substituted with one or more substituents selected from the group consisting of a substituted or unsubstituted aliphatic group, a halogen, a substituted or unsubstituted aromatic group, substituted or unsubstituted heteroaromatic group, substituted or unsubstituted cycloalkyl, substituted or unsubstituted heterocycloalkyl, substituted or unsubstituted aralkyl, substituted or unsubstituted heteroaralkyl, cyano, nitro, -NR₄R₅, -C(O)₂H, a substituted or unsubstituted alkoxycarbonyl, -C(O)₂-haloalkyl, a substituted or unsubstituted alkylthio, a substituted or unsubstituted alkylsulfinyl, a substituted or unsubstituted alkylsulfonyl, a substituted or unsubstituted arylthio, a substituted or unsubstituted arylsulfinyl, a substituted or unsubstituted arylsulfonyl, a substituted or unsubstituted alkyl carbonyl, -C(O)-haloalkyl, a substituted or unsubstituted aryloxy, a substituted or unsubstituted carboxamido, substituted or unsubstituted tetrazolyl, trifluoromethylsulphonamido, trifluoromethylcarbonylamino, a substituted or unsubstituted alkynyl, a substituted or unsubstituted alkyl amido or alkylcarboxamido; a

substituted or unsubstituted aryl amido or arylcarboxamido, a substituted or unsubstituted styryl, -S(substituted or unsubstituted heteroaryl) and a substituted or unsubstituted aralkyl amido, [or] aralkylcarboxamido or -C(O)NR_fR_g, R_c and CH₂OR_c;

wherein R_f, R_g and the nitrogen atom together form a 3-, 4-, 5-, 6- or 7- membered, substituted or unsubstituted heterocycloalkyl, substituted or unsubstituted heterobicycloalkyl or a substituted or unsubstituted heteroaromatic; or

R_f and R_g are each, independently, -H, a substituted or unsubstituted aliphatic group or a substituted or unsubstituted aromatic group;

R_c is hydrogen, or substituted or unsubstituted alkyl or substituted or unsubstituted aryl, -W-(CH₂)_t-NR_dR_e, -W-(CH₂)_t-O-alkyl, -W-(CH₂)_t-S-alkyl, -W-(CH₂)_t-OH, or -W-(CH₂)_t-NR_dR_e, -W-(CH₂)_t-O-alkyl, -W-(CH₂)_t-S-alkyl, -W-(CH₂)_t-OH or W-(CH₂)_t-NH-C(O)R_f

t is an integer from 0 to about 6;

W is a bond or -O-, -S-, -S(O)-, -S(O)₂- or -NR_k-;

R_k is -H or alkyl;

R_d, R_e and the nitrogen atom to which they are attached together form a 3, 4, 5, 6 or 7-membered substituted or unsubstituted heterocycloalkyl or substituted or unsubstituted heterobicyclic group; or

R_d and R_e are each, independently, -H, alkyl, alkanoyl or -K-D;

wherein K is -S(O)₂-, -C(O)-, -C(O)NH-, -C(O)₂- or a direct bond and D is a substituted or unsubstituted aryl, a substituted or unsubstituted heteroaryl, a substituted or unsubstituted aralkyl, a substituted or unsubstituted heteroaromatic group, a substituted or unsubstituted heteroaralkyl, a substituted or unsubstituted cycloalkyl, a substituted or unsubstituted heterocycloalkyl, a substituted or unsubstituted amino, a substituted or unsubstituted aminoalkyl, a substituted or unsubstituted aminocycloalkyl, COOR_i, or substituted or unsubstituted alkyl;

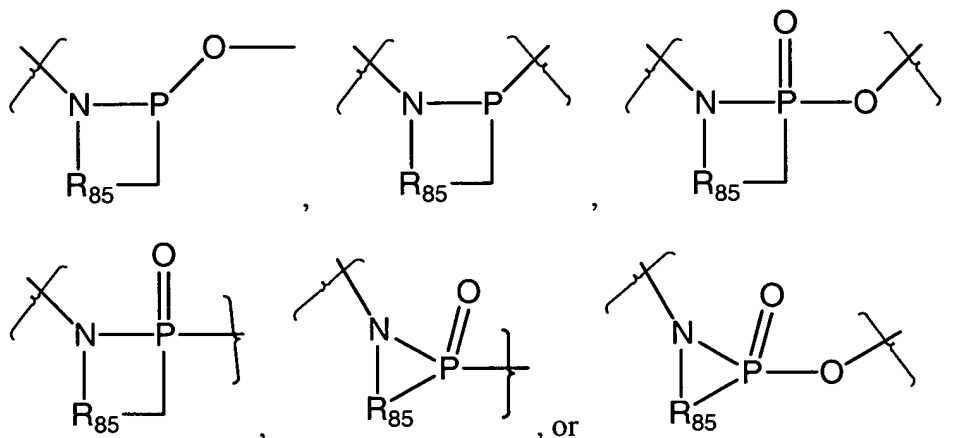
wherein R_i is a substituted or unsubstituted aliphatic group or a substituted or unsubstituted aromatic group;

L is -S-; -S(O)-; -S(O)₂-; -N(C(O)OR)-; -N(C(O)R)-; -N(SO₂R)-; -CH₂O-; -CH₂S-; -CH₂N(R)-; -CH(NR)-; -CH₂N(C(O)R)-; -CH₂N(C(O)OR)-; -CH₂N(SO₂R)-; -CH(NHR)-; -CH(NHC(O)R)-; -CH(NHSO₂R)-; -CH(NHC(O)OR)-; -CH(OC(O)R)-; -CH(OC(O)NHR)-; -CH=CH-; -C(=NOR)-; -C(O)-; -CH(OR)-; -C(O)N(R)-; -N(R)C(O)-; N(R)S(O)-; -N(R)S(O)₂-;

-OC(O)N(R)-; -N(R)C(O)N(R)-; -NRC(O)O-; -S(O)N(R)-; -S(O)₂N(R)-; -N(C(O)R)S(O)-; -N(C(O)R)S(O)₂-; -N(R)S(O)N(R)-; -N(R)S(O)₂N(R)-; -C(O)N(R)C(O)-; -S(O)N(R)C(O)-; -S(O)₂N(R)C(O)-; -OS(O)N(R)-; -OS(O)₂N(R)-; -N(R)S(O)O-; -N(R)S(O)₂O-; -N(R)S(O)C(O)-; -N(R)S(O)₂C(O)-; -SON(C(O)R)-; -SO₂N(C(O)R)-; -N(R)SON(R)-; -N(R)SO₂N(R)-; -C(O)O-; -N(R)P(OR')O-; -N(R)P(OR')-; -N(R)P(O)(OR')O-; -N(R)P(O)(OR')-; -N(C(O)R)P(OR')O-; -N(C(O)R)P(OR')-; -N(C(O)R)P(O)(OR')O- or -N(C(O)R)P(OR')-, wherein R and R' are each, independently, -H, an acyl group, a substituted or unsubstituted aliphatic group, a substituted or unsubstituted aromatic group, a substituted or unsubstituted heteroaromatic group, or a substituted or unsubstituted cycloalkyl group; or

L is -R_bN(R)S(O)₂-, -R_bN(R)P(O)-, or -R_bN(R)P(O)O-, wherein R_b is an alkylene group which when taken together with the sulphonamide, phosphinamide, or phosphonamide group to which it is bound forms a five or six membered ring fused to ring A; or

L is represented by one of the following structural formulas:



wherein R₈₅ taken together with the phosphinamide, or phosphonamide is a 5-, 6-, or 7 - membered, aromatic, heteroaromatic or heterocycloalkyl ring system;

R₁ is -H, 2-phenyl-1,3-dioxan-5-yl, a C₁-C₆ alkyl group, a C₃-C₈ cycloalkyl group, a C₅-C₇ cycloalkenyl group or an optionally substituted phenyl(C₁-C₆ alkyl) group, wherein the alkyl, cycloalkyl and cycloalkenyl groups are optionally substituted by one or more groups of formula -OR^a; provided that -OR^a is not located on the carbon attached to nitrogen;

R^a is -H or a C₁-C₆ alkyl group or a C₃-C₆ cycloalkyl;

R_2 is -H, a substituted or unsubstituted aliphatic group, a substituted or unsubstituted cycloalkyl, a halogen, -OH, cyano, a substituted or unsubstituted aromatic group, a substituted or unsubstituted heteroaromatic group, a substituted or unsubstituted heterocycloalkyl, a substituted or unsubstituted aralkyl, a substituted or unsubstituted heteroaralkyl, $-NR_4R_5$, or $-C(O)NR_4R_5$;

R_3 is a substituted or unsubstituted cycloalkyl, a substituted or unsubstituted aromatic group, a substituted or unsubstituted heteroaromatic group, or a substituted or unsubstituted heterocycloalkyl; or L is $-NRSO_2-$, $-NRC(O)-$, $-NRC(O)O-$, $-S(O)_2NR-$, $-C(O)NR-$ or $-OC(O)NR-$, and R_3 is substituted or unsubstituted alkyl, substituted or unsubstituted alkenyl or substituted or unsubstituted aralkyl;

provided that j is 0 when L is $-CH_2NR-$, $-C(O)NR-$ or $-NRC(O)-$ and R_3 is azacycloalkyl or azaheteroaryl;

R_4 , R_5 and the nitrogen atom together form a 3, 4, 5, 6 or 7-membered, substituted or unsubstituted heterocycloalkyl, substituted or unsubstituted heterobicycloalkyl or a substituted or unsubstituted heteroaromatic; or

R_4 and R_5 are each, independently, -H, azabicycloalkyl, a substituted or unsubstituted alkyl group or Y-Z;

Y is selected from the group consisting of $-C(O)-$, $-(CH_2)_p-$, $-S(O)_2-$, $-C(O)O-$, $-SO_2NH-$, $-CONH-$, $(CH_2)_pO-$, $-(CH_2)_pNH-$, $-(CH_2)_pS-$, $-(CH_2)_pS(O)-$, and $-(CH_2)S(O)_2-$;

p is an integer from 0 to 6;

Z is a substituted or unsubstituted alkyl, substituted or unsubstituted amino, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl or substituted or unsubstituted heterocycloalkyl group; and
j an integer from 0 to 6.

6. (Thrice Amended) The compound of Claim 5 wherein ring A is substituted with one or more substituent selected from the group consisting of F, Cl, Br, I, CH_3 , NO_2 , CN, CO_2CH_3 , CF_3 , t-butyl, pyridyl, substituted or unsubstituted oxazolyl, substituted or unsubstituted benzyl, substituted or unsubstituted benzenesulfonyl, substituted or unsubstituted phenoxy, substituted or unsubstituted phenyl, [substituted or unsubstituted amino] NR_4R_5 , carboxyl, substituted or unsubstituted tetrazolyl, styryl, -S-(substituted or unsubstituted aryl), -S-

(substituted or unsubstituted heteroaryl), substituted or unsubstituted heteroaryl, substituted or unsubstituted heterocycloalkyl, alkynyl, $-\text{C}(\text{O})\text{NR}_f\text{R}_g$, R_c and CH_2OR_c ;

R_f , R_g and the nitrogen atom together form a 3, 4, 5, 6 or 7-membered, substituted or unsubstituted heterocycloalkyl, substituted or unsubstituted heterobicycloalkyl or a substituted or unsubstituted heteroaromatic; or

R_f and R_g are each, independently, $-\text{H}$, a substituted or unsubstituted aliphatic group or a substituted or unsubstituted aromatic group; and

R_c is hydrogen, substituted or unsubstituted alkyl, substituted or unsubstituted aryl, $-\text{W}-(\text{CH}_2)_t-\text{NR}_d\text{R}_e$, $-\text{W}-(\text{CH}_2)_t-\text{O}-\text{alkyl}$, $-\text{W}-(\text{CH}_2)_t-\text{S}-\text{alkyl}$, or $-\text{W}-(\text{CH}_2)_t-\text{OH}$;

t is an integer from 0 to 6;

W is a bond or $-\text{O}-$, $-\text{S}-$, $-\text{S}(\text{O})-$, $-\text{S}(\text{O})_2-$, or $-\text{NR}_k-$;

R_k is $-\text{H}$ or alkyl; and

R_d , R_e and the nitrogen atom to which they are attached together form a 3, 4, 5, 6 or 7-membered substituted or unsubstituted heterocycloalkyl, substituted or unsubstituted heterobicycloalkyl or a substituted or unsubstituted heteroaromatic; or

R_d and R_e are each, independently, $-\text{H}$, alkyl, alkanoyl, or $-\text{K}-\text{D}$;

K is $-\text{S}(\text{O})_2-$, $-\text{C}(\text{O})-$, $-\text{C}(\text{O})\text{NH}-$, $-\text{C}(\text{O})_2-$, or a direct bond;

D is a substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl, substituted or unsubstituted aralkyl, substituted or unsubstituted heteroaromatic group, substituted or unsubstituted heteroaralkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted heterocycloalkyl, substituted or unsubstituted amino, substituted or unsubstituted aminoalkyl, substituted or unsubstituted aminocycloalkyl, COOR_i , or a substituted or unsubstituted alkyl; and

R_i is a substituted or unsubstituted aliphatic group or a substituted or unsubstituted aromatic group.